

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listing, of claims in the application:

1           1.       (Amended) A method of self-calibrating and testing the vaporized flow of  
2 a liquid precursor in a thin film vaporization system comprising the steps of:  
3           providing a thin film vaporization system comprising stored liquid precursors in  
4 tanks under pressure connected to a deposition chamber via a manifold which in turn is  
5 connected to pipe lines emanating from each tank and coupled to own liquid flow  
6 meters (LFMs) and injection valves (IVs);  
7           activating a servo mechanism to pump down said deposition chamber to achieve  
8 partial vacuum therein;  
9           opening a downstream throttle valve (TV) for a carrier gas to flow through said  
10 manifold to commence self-calibration wherein said carrier gas is a ~~second~~ helium  
11 carrier gas;  
12           a first timing to monitor a baseline self-calibrated pressure by a pre-determined  
13 TV opening which correlates with the specified baseline pressure in said deposition  
14 chamber;  
15           a second timing to allow for the stabilization of carrier gas after throttling said TV  
16 to a predetermined opening;  
17           selecting a liquid precursor and its own said respective pipe line with said own  
18 LFM and own IV connected to said deposition chamber via said manifold;  
19           setting said own IV to a predetermined opening to start said liquid precursor to  
20 flow;

21 setting said TV opening to a normal liquid precursor flow rate for film deposition;  
22 a third timing to allow for liquid precursor flow to stabilize;  
23 a fourth timing to allow vaporization of said liquid precursor in said deposition  
24 chamber;  
25 measuring final pressure in said deposition chamber;  
26 stopping the flow of said precursor fluid; and  
27 pumping down said deposition chamber to continue with said film deposition  
28 pending the result of said pressure rise.

1 2. (Original) The method according to claim 1, wherein said tanks are  
2 pressurized by helium gas.

1 3. (Original) The method according to claim 2, wherein said helium gas is  
2 pressurized to between about 20 to 30 pounds per square inch gauge (psig).

1 4. (Original) The method according to claim 1, wherein said helium gas is  
2 kept at room temperature.

1 5. (Original) The method according to claim 1, wherein said manifold has  
2 heater elements.

1 6. (Original) The method according to claim 5, wherein said heated fixture  
2 elements are spaced nominally at 290 mils between about 250 to 350 mils from  
3 distribution shower head.

1 7. (Original) The method according to claim 5, wherein said heated fixture is  
2 heated nominally to 400° C between about 350 to 450° C.

1 8. (Canceled)

1           9.     (Amended) The method according to claim 1, wherein flow of said ~~second~~  
2     helium carrier gas through said manifold is between about 750 to 850 milligrams per  
3     minute (mgm).

1           10.    (Original) The method according to claim 1, wherein said first timing is  
2     between about 5 to 15 seconds.

1           11.    (Original) The method according to claim 1, wherein said baseline self-  
2     calibrated pressure is between about 2 to 4 torr.

1           12.    (Original) The method according to claim 1, wherein said second timing is  
2     between about 4 to 6 seconds.

1           13.    (Original) The method according to claim 1, wherein said liquid precursor  
2     is tetraethylorthosilicate (TEOS).

1           14.    (Original) The method according to claim 1, wherein said liquid precursor  
2     is triethylborate (TEB).

1           15.    (Original) The method according to claim 1, wherein said liquid precursor  
2     is tri-ethylphosphate (TEPO).

1           16.    (Original) The method according to claim 1, wherein said injection valve  
2     (IV) comprises a venturi tube.

1           17.    (Previously Presented) The method according to claim 1, wherein said  
2     normal liquid precursor flow rate is between 800 to 1000 milligram per minute (mgm).

1           18.    (Original) The method according to claim 1, wherein said third timing to  
2     allow for liquid precursor to stabilize is between about 7 to 9 seconds.

1           19.    (Original) The method according to claim 1, wherein said fourth timing to  
2     allow for liquid precursor vaporized flow to be verified is between about 4 to 6 seconds.

1           20.    (Original) The method according to claim 1, wherein said final pressure in  
2   said deposition chamber is between about 6.5 and 7.5 torr.

1           21.    (Original) The method according to claim 1, wherein said pumping down  
2   said deposition chamber is accomplished within between about 9 to 11 seconds.

1           22 – 31.   (Canceled)